



Kvant Ltd. has been established in 1995 as a joint venture of two small companies established in 1990 and 1993 due to the rising wmarket requirement. Kvant's products are based on high quality components, which are reliable and are able to provide the best performance in the right time. High reliability of laser diodes and effective design of laser systems has brought many successful permanent and temporary laser installations all over the world. Kvant is an expert group of creative and responsible professional engineers working together within large and small projects. The team work is the basic requirement for successful design, manufacturing, management, production and other cutting edge innovations. Kvant offers wide range of customer support services and is flexible toward needs of every customer. Our service also includes training of new laser operators, project management, creative and technical consultancy.



Kvant has been certified by
ISO 9001:2000



Showroom

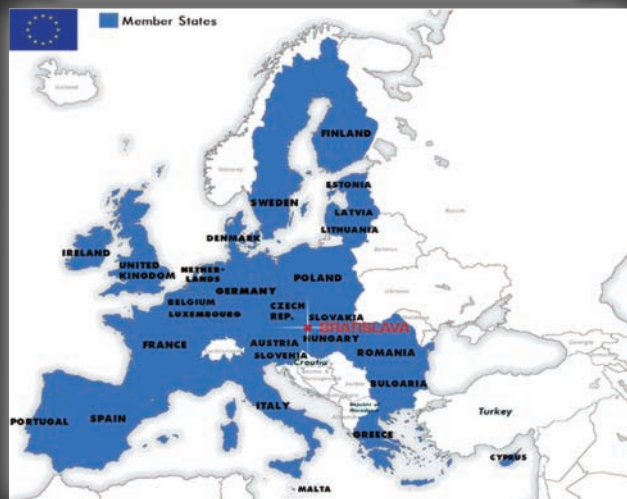


Kvant residence

KVANT Ltd.

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www.lasershow.sk

RESEARCH & DEVELOPMENT

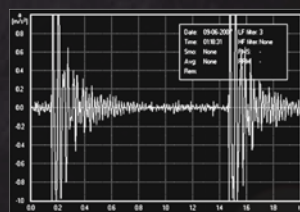
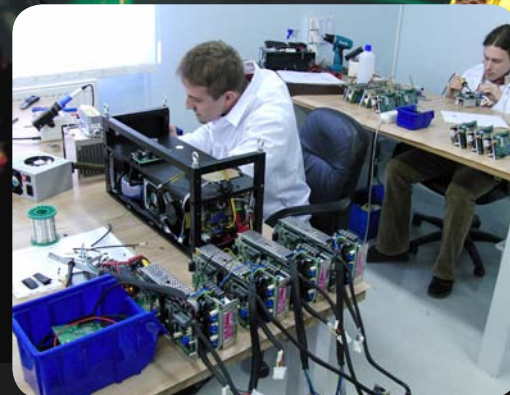
Kvant is one of the biggest high-tech laser manufacturers worldwide. Our development has always been aimed at reaching the following targets:

- long lifetime
- highest possible reliability
- maintenance free operation
- flexibility and adaptability of the systems

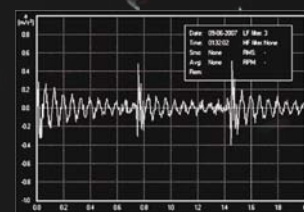
The quality of our products is based on usage of high-end components. We use lasers provided by renowned suppliers from USA, Japan and Germany. At the same time Kvant has also developed and produced excellent laser modules based on top quality laser diodes. Intellectual property rights of Kvant are protected by several international patents in the area of beam shaping and modification of laser light beam parameters.

Our R&D closely cooperates with the Slovak Academy of Science, Slovak University of Technology and other technological institutions. One of the main targets of our R&D department is to find, recognize and eliminate hidden sources of failures. To reach this goal modern analytical methods are used.

Mechanical bumps, shock and enormous vibrations from audio systems can also cause laser beam misalignment or even serious failures of laser device. Using vibrometric method our R&D department was able to measure the vibrations of base plate and propose corrective design changes. All Spectrum series lasers are equipped with rubber silent blocks located below the maximum deflection points in order to decrease vibration amplitude to minimal values. At pictures below you can see the vibrometric measurement at the device with silent blocks and without silent blocks using same source of vibrations. The amplitude of base plate vibrations is rapidly lower for version with silent blocks.

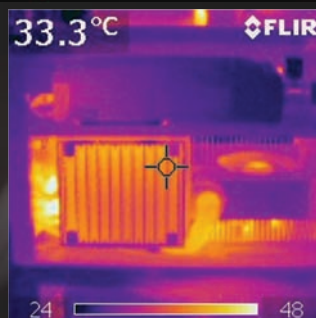


Without silent blocks



With silent blocks

Evaluation of thermal strain of all components and identification of exceeded values using a thermo vision camera in order to perform corrective measures.



We use the thermo vision camera to analyze the real thermal strain. On the picture you can see Maxim series laser thermal view. This system has been optimized and the temperatures after the changes decreased to safe values.

WWW.LASERSHOW.SK

WWW.LASERSHOW.SK

WE OFFER:

- Rental of lasers
- Laser show production
- Graphic and beam shows design
- Sale ready ILDA shows
- Accessories rental service
- Rental of LED screens for interior and exterior
- ... and more



- NEW web
- Bazzar
- Online shop
- Frames
- Shows

NEW LASER SERIES WITH NEW FEATURES AND PERFORMANCE

Spectrum
2.5W & 3W



Spectrum
500mW, 1W, 1.6W & 2W



LC blue control display

Voltage	226	V
Current	0,1	A
Air temp.	21	°C
Laser temp.	21	°C

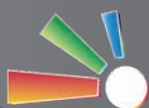
Spectrum
8W, 10W & 15W



VISIT US: MESSE FRANKFURT, PALME DUBAI, PALME SINGAPORE, PLASA '09 LONDON

www.lasershow.sk

KVANT[®]



from **0.5W** up to **3W**

SPECTRUM

High precision middle power range RGB laser system

■ ■ ■ Laser Technology

- RGB semiconductor laser
- air cooled laser with internal electronic system
- colormixing by precision filters

■ ■ ■ Applications

- discotheques and clubs
- theaters and concerts
- techno parties
- presentations
- weddings and birthday parties
- advertising

■ ■ ■ Main features

- temperature stabilized
- maximal beam brightness setting for each color
- hermetically separated sectors of laser (clean closed sector, air cooled sector)
- active warming up time 15 sec.
- beam direction and alignment setting
- inverted axis projection
- low weight

■ ■ ■ Operation

- easy maintenance
- easy access to adjusting items
- low power consumption

■ ■ ■ Power supply

- power supply 230V/50Hz or 110V/60Hz on request

■ ■ ■ Color balance

- excellent color spectrum up to 16 mil. colors
- easy to make cold white "discharge lamp" colors

■ ■ ■ Cooling

- air cooled laser
- Peltier TEC cooling and heating system

■ ■ ■ Scanning system

- scanning system x,y speed up to 40kpps
- drawing area 80° for both axes

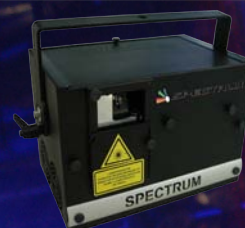
■ ■ ■ Safety protections

- electronic and fuse protection of scanners
- adjustable safety card on request
- beam shutter on request
- safety key
- overvoltage protection

System Spectrum

RGB-500mW

RGB-1W



500mW

1W

Output power

Wavelength

200mW/640nm red diode
100mW/532nm green DPSS
200mW/445nm blue diode

300mW/640nm red diode
300mW/532nm green DPSS
500mW/445nm blue diode

Input power voltage

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

Modulation/ blanking

0-5V analog, up to 50 kHz
TTL

0-5V analog, up to 50 kHz
TTL

Beam divergence

<1 mrad

<1 mrad

Beam diameter

2mm

2mm

Power consumption

max 250VA

max 250VA

Weight / dimensions

8,8kg/ 267x177x192mm

8,8kg/ 267x177x192mm

Input / output connection

1x input ILDA DB25 male
1x output ILDA DB25 female

1x input ILDA DB25 male
1x output ILDA DB25 female

Operating / storage temperature

10 to 35°C / 0 to 50°C

10 to 35°C / 0 to 50°C

Scanning system

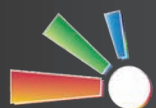
Maximal angle

Scanrate



LC BLUE CONTROL DISPLAY

- CONTROL OF AC INPUT VOLTAGE AND CURRENT
- CONTROL OF AIR TEMPERATURE
- CONTROL OF LASERDIODE TEMPERATURE
- OVERVOLTAGE PROTECTION



SPECTRUM

High precision middle power range RGB laser system

RGB-1,6W



1,6W

600mW/640nm red diode
500W/532nm green DPSS
500mW/445nm blue diode

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

0-5V analog, up to 50 kHz
TTL

<1 mrad

2mm
max 250VA

8,8kg/ 267x177x192mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

RGB-2W



2W

600mW/640nm red diode
500mW/532nm green DPSS
1W/445nm blue diode

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

0-5V analog, up to 50 kHz
TTL

<1 mrad

3mm
max 300VA

8,8kg/ 267x177x192mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

RGB-2,5W



2,5W

1,2W/640nm red diode
500mW/532nm green DPSS
1W/445nm blue diode

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

0-5V analog, up to 50 kHz
TTL

<1.3 mrad

3mm
max 350VA

13.5kg/ 350x200x200mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

3W



3W

1W/640nm red diode
1W/532nm green DPSS
1W/445nm blue diode

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

0-5V analog, up to 50 kHz
TTL

<1.3 mrad

3mm
max 350VA

13.5kg/ 350x200x200mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

LM scanners; CT 6215H scanners; temperature stabilized; mirror reflectivity 90%, dielectric mirror coating

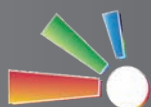
80° for both axes (LM, CT 6215H)

40kpps/CT6215H; 25kpps/LM

SPECTRUM is a smaller full color laser system specially designed for indoor application. Spectrum series with excellent color spectrum and great beam quality allows creating fabulous interior show and gracious laser show in small outdoor spaces as well. Low weight and small dimensions enables its comfortable handling. Standard equipment of the system contains 25m ILDA signal cable and is shipped in flight case equipped with soft foam.

Product is certified by **CE, ISO 9001:2000**

Orion Hall, Brno 2008



from 5W up to 25W

SPECTRUM

Professional outdoor color laser system

● ● ● Laser Technology

- top level air cooled semiconductor laser
- high-precision technology

● ● ● Applications

- special outdoor events
- opening ceremonies
- national festivals and celebrations
- advertising displays
- discotheques

● ● ● Main features

- maximal beam brightness setting
- hermetically separated sectors of laser (clean closed sector, air cooled sector)
- active warming up time 45 sec.
- beam direction and alignment setting
- inverted axis projection
- low weight

● ● ● Operation

- low consumption
- no special requirements for maintenance
- very easy handling

● ● ● Power supply

- power supply 230V/50Hz
- 110V/60Hz on request

● ● ● Color balance

- excellent color spectrum up to 16 mil. colors
- easy to make cold white "discharge lamp" colors

● ● ● Cooling

- air cooled laser
- Peltier cooling and heating system

● ● ● Scanning system

- scanning system x,y speed up to 30kpps
- drawing area 80° for both axes

● ● ● Optical elements

- high precision Thorlabs optical components
- adjustable mounts

● ● ● Safety protections

- electronic and fuse protection of scanners
- adjustable safety card on request
- beam shutter on request
- safety key
- overvoltage protection

System Spectrum

RGB-5W



Output power

5W

Wavelength

1.5W/635nm red diode
2W/532nm green DPSS
2W/445nm blue diode

Input power voltage

230VAC / 50Hz
(+/- 5%)
110VAC / 50Hz

Modulation/ blanking

0-5V analog, up to 50 kHz
TTL

Beam divergence

<1.5 mrad

Beam diameter

4mm

Power consumption

max 500VA

Weight / dimensions

30kg/ 562x315x275mm

Input connection

1x input ILDA DB25 male
1x output ILDA DB25 female

Operating / storage temperature

10 to 35°C / 0 to 50°C

Scanning system

Maximal angle

Scanrate

30 kpps/CT6215H

SPECTRUM is a newly developed professional white light laser system. ILDA compatibility makes it more variable. Amazing color balance and high power offers a unique experience for audience. High technology of components secures long-lasting laser utilization. Standard equipment of the system contains 25m ILDA signal cable and is shipped in flight case equipped with soft foam. Product is certified by **CE, ISO 9001:2000**

RGB-8W



8W

2.5W/635nm red diode
3W/532nm green DPSS
3W/445nm blue diode

230VAC / 50Hz
(+/- 5%)

110VAC / 50Hz

0-5V analog, up to 50 kHz

TTL

<1.5 mrad

4mm

max 500VA

25kg/ 250x250x550mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

RGB-10W



10W

2.5W/635nm red diode
5W/532nm green DPSS
3W/445nm blue diode

230VAC / 50Hz
(+/- 5%)

110VAC / 50Hz

0-5V analog, up to 50 kHz

TTL

<1.5 mrad

4mm

max 500VA

25kg/ 250x250x550mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

RGB-15W



15W

4W / 635nm red diode
8W/532nm green DPSS
4W/445nm blue diode

230VAC / 50Hz
(+/- 5%)

110VAC / 50Hz

0-5V analog, up to 50 kHz

TTL

<1.5 mrad

5mm

max 500VA

25kg/ 250x250x550mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

RGB-25W



25W

6W/635nm red diode
8W/532nm green DPSS
6W/445nm blue diode
5W /577nm yellow

230VAC / 50Hz
(+/- 5%)

110VAC / 50Hz

0-5V analog, up to 50 kHz

TTL

<1.5 mrad

5mm

max 600VA

51kg/ 670x370x300mm

1x input ILDA DB25 male
1x output ILDA DB25 female

10 to 35°C / 0 to 50°C

CT 6215H scanners; mirror reflectivity 98%, dielectric mirror coating

80° for both axes (CT 6215H)

30 kpps/CT6215H

30 kpps/CT6215H

30 kpps/CT6215H

30 kpps/CT6215H

from **0.5W** up to **8W**



The most popular green laser system with
variety of applications

● ● ● Laser Technology

- diode-pumped thin-disk laser (JenLas)
- optically pumped semiconductor CW laser diode (Coherent)

● ● ● Applications

- discotheques and clubs
- theaters and concerts
- techno parties
- presentations
- opening ceremonies
- advertising

● ● ● Main features

- air cooled
- no water requirement
- hermetically separated sectors of laser (clean closed sector, air cooled sector)
- thermal stabilization
- maximal beam brightness setting
- active warming up time 45 sec.
- inverted axis projection
- ILDA input/output
- low weight
- focusable internal collimator

● ● ● Operation

- easy access to optical parts for maintenance
- low power consumption
- temperature stability in extreme conditions

● ● ● Internal electronic system

- power supply 230V/50Hz or 110V/60Hz on request
- regulated current supply with current limiter

● ● ● Optical elements

- antireflect surface of collimator lenses decrease the power losses
- external optional collimator with variable ratio for excellent divergence and better beam visibility
- using ext. collimator for visibility up to 10km

● ● ● Safety protections

- electronic and fuse protection of scanners
- safety key
- acoustic signalization of overheating
- emergency Stop button
- AC voltage drop-out protection



COHERENT



JENLAS





The most popular green laser system with variety of applications

MAXIM laser system with high-speed scanners combine professional projection and extremely small design. Standard equipment of the system contains 25m ILDA signal cable and is shipped in a flight case equipped with soft foam.

Product is certified by **CE, ISO 9001:2000**

System Maxim	MX-0.5W/MX-1W/MX-2W	MX-3W	MX-5W	MX-8W
Output power	0.5W, 1W or 2W	3W	5W	8W
Wavelength	532nm green DPSS	JENLAS 532nm green DPSS COHERENT 532nm green OPSL	JENLAS 532nm green DPSS COHERENT 532nm green OPSL	JENLAS 532nm green DPSS COHERENT 532nm green OPSL
Input power voltage	230VAC / 50Hz (+/- 5%) 110VAC / 50Hz	230VAC / 50Hz (+/- 5%) 110VAC / 50Hz	230VAC / 50Hz (+/- 5%) 110VAC / 50Hz	230VAC / 50Hz (+/- 5%) 110VAC / 50Hz
Modulation/ blanking	analog 0-5V up to 50kHz TTL	analog 0-5V up to 50kHz TTL	analog 0-5V up to 50kHz TTL	analog 0-5V up to 50kHz TTL
Beam divergence	<1 mrad	<1.5 mrad	JENLAS <1.5mrad COHERENT <1.3mrad	JENLAS <1.5 mrad COHERENT <1.4mrad
Beam diameter	2.5mm	3mm	JENLAS 3mm COHERENT standard 2.5mm typ. 2.2mm	JENLAS 4mm COHERENT standard 2.5mm typ. 2.2mm
Power consumption	max 220VA	max 500VA	max 500VA	max 600VA
Weight / dimensions	13kg/ 420x215x245mm	15kg/ 420x215x245mm	15kg/ 420x215x245mm	21kg/ 495x215x245mm 15kg/ 420x215x245mm (Coherent)
Input / output connection	ILDA DB25 input male 1x ILDA DB25 input female 1x	ILDA DB25 input male 1x ILDA DB25 input female 1x	ILDA DB25 input male 1x ILDA DB25 input female 1x	ILDA DB25 input male 1x ILDA DB25 input female 1x
Operating / storage temperature	10 to 35°C / 0 to 50°C	10 to 35°C / 0 to 50°C	10 to 35°C / 10 to 50°C	10 to 35°C / 10 to 50°C
Scanning system	LM scanners; CT 6215H scanners; mirror reflectivity 98%, dielectric mirror coating			
Maximal angle	80° for both axes (CT 6215H, LM)			
Scanrate	35kpps/CT6215H, 30kpps/CT6215H for 8W (JenLas) 25kpps/LM			

Audi Q5 presentation, Bratislava 2008

15W MAXIM LASER SYSTEM

Powerful green laser system with
variety of applications

■ ■ ■ Laser Technology

- optically pumped semiconductor CW laser diode (Coherent)

■ ■ ■ Applications

- big opening ceremonies
- special outdoor events
- building installation
- static beam projection
- advertising

■ ■ ■ Main features

- possibility to use both lasers separately
- thermal stabilization
- maximal beam brightness setting
- active warming up time 45 sec.
- beam direction and focus set.
- inverted axis projection
- compact design style
- excellent efficiency
- high beam quality
- temperature stability in extreme conditions
- ILDA input/output

■ ■ ■ Operation

- low operating and maintenance cost
- easy handling
- no more external cooling water supply
- low main power supply requirements (no three-phase supply necessary)
- long lifetime

■ ■ ■ Internal electronic system

- power supply 230V/50Hz or 110V/60Hz on request
- regulated current supply with current limiter
- maximal beam brightness setting

■ ■ ■ Optical elements

- antireflect surface of collimator lenses decrease the power losses
- external optional collimator with variable ratio for excellent divergence and better beam visibility
- using ext. collimator for visibility up to 10km
- high precision Thorlabs optical components adjustable mounts



Becherovka presentation, Bratislava 2008



Powerful green laser system with
variety of applications

Dimensions

47x52x23cm (h:59cm with handle)

Weight

44kg

Power consumption

230V 5A

Divergence

<1.3mrad

Beam diameter

<5mm

Scanning system

CT6215H

Scanrate

30kpps

+ special ILDA signal cable splitter

MAXIM 15W air cooled laser system for the green spectral range has been developed for high-power applications.

It is based on revolutionary technology of two optically pumped semiconductor cw laser diodes (Coherent). The beam polarization cube combines beams of both lasers into a single powerful laser beam. The waveplate coating secure beam with very low losses. The design of the product makes it easy to split MX 15 to two individual 8W laser instead of one 15W laser. Standard equipment contains two scanning systems, two 25m ILDA signal cables, special ILDA splitter and it is shipped in two flight cases equipped with soft foam.

Product is certified by **CE, ISO 9001:2000**



Orion Art in cooperation with Kvant, Montenegro 2008

50W MAXIM LASER SYSTEM

EXTREMELY powerful green laser system
with variety of applications

■ ■ ■ Laser Technology

- optically pumped semiconductor CW laser diode (Coherent)
- outdoor air cooled laser with internal electronic system

■ ■ ■ Applications

- big opening ceremonies
- special outdoor events
- building installation
- static beam projection
- advertising

■ ■ ■ Main features

- connection 230V/16A, 50Hz (single phase)
- thermal stabilization
- maximal master brightness setting
- brightness potentiometers for each laser module
- active warming up time 1 min.
- beam direction and alignment setting
- compact design style
- minimal operating costs
- high beam quality
- temperature stability in extreme conditions

■ ■ ■ Operation

- considerably lower operating and maintenance cost
- no more external cooling water supply
- high efficiency
- long lifetime

■ ■ ■ Internal electronic system

- power supply 230V/50Hz or 110V/60Hz on request
- regulated current supply with current limiter

■ ■ ■ Optical elements

- antireflect surface of collimator lenses decrease the power losses
- high precision Thorlabs optical components
- adjustable mounts



MAXIM 50W air cooled laser system for the green spectral range has been developed for high power applications.

Product has been designed for ease of use. Maxim 50W combines beams of 6 selected Coherent modules to get a single most powerful beam. Since the divergence of the Maxim 50W beam is extra low, its beam diameter is larger. Therefore Maxim 50W is excellent for brilliant beam shows with accent on the highest available brightness

Product is certified by **CE, ISO 9001:2000**

Dimensions

116x30x56cm

Weight

120kg

Power consumption

230V/16A

Divergence

<1.0mrad

Beam diameter

<12mm

Scanning system

CT6231H

Scanrate

18kpps

Scanning angle

80 degrees



KVANT2000

middle power showlaser system series



Red version

Green version

Blue version

output power 150mW -300mW
wavelength 640nm
input power 230V/50Hz
110V/ 50 Hz
power consumption 200VA
beam diameter <3mm
beam divergence 1 mrad
blanking 0-5V analog, 10kHz; TTL
input connection ILDA DB25 male
operating temperature 10 to 35°C
storage temperature 0 to 50°C
scanning system CT6215H scanners
LM scanners
mirror reflectivity 98%
dielectric mirror coating
max.angle 80° for both axes
(CT 6215H, LM)
scanrate 40kpps/6215H
25kpps/LM
lifetime >5.000 hours

output power 100mW-300mW
wavelength 532nm
input power 230V/ 50 Hz
110V/ 50 Hz
power consumption 200VA
beam diameter <2mm
beam divergence 1.2 mrad
blanking 0-5V analog, 20kHz; TTL
input connection ILDA DB25 male
operating temperature 10 to 35°C
storage temperature 0 to 50°C
scanning system CT6215H scanners
LM scanners
mirror reflectivity 98%
dielectric mirror coating
max.angle 80° for both axes
(CT 6215H, LM)
scanrate 40kpps/6215H
25kpps/LM
lifetime >5.000 hours

output power 500mW
wavelength 445nm
input power 230V/ 50 Hz
110V/ 50 Hz
power consumption 200VA
beam diameter <3,5mm
beam divergence 1 mrad
blanking 0-5V analog, 30kHz; TTL
input connection ILDA DB25 male
operating temperature 10 to 35°C
storage temperature 0 to 50°C
scanning system CT6215H scanners
LM scanners
mirror reflectivity 98%
dielectric mirror coating
max.angle 80° for both axes
(CT 6215H, LM)
scanrate 40kpps/6215H
25kpps/LM
lifetime >5.000 hours

KVANT RG - Pro

middle power showlaser system series

Laser Technology

- middle power range with R-Y-G
- spectrum colors air cooled laser
- with internal electronic system

Applications

- small disco clubs
- private parties
- wedding parties
- permanent installations

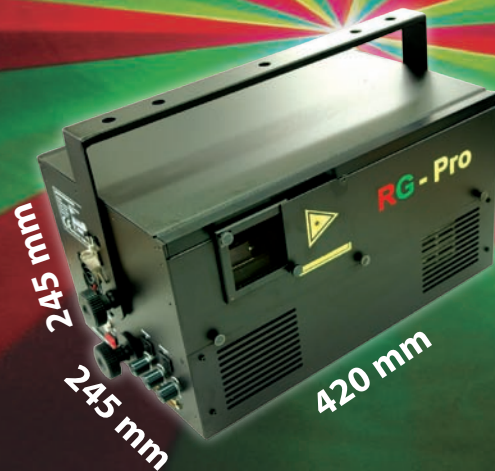
Operation

- easy to install and easy to use laser system
- extra low weight
- ILDA adaptability

Wavelength

532nm, 640nm

+ Ready for RGB upgrade



output power 600mW (300mW/532nm, 300mW/640nm)

input power 230V/50Hz
110V/50Hz
power consumption 200VA
beam diameter < 2mm
beam divergence < 1mrad
blanking 0-5V analog, 20 kHz
input connection ILDA DB25 male
operating temperature 10 to 35°C
storage temperature 0 to 50°C
scanning system CT6215H scanners
LM scanners

mirror reflectivity 98%
dielectric mirror coating
max angle 80° for both axes
(CT 6215H, LM)

scanrate 40kpps/CT6215H
25kpps/LM
lifetime >5.000 hours

PUTON

for MAXIM

Smart upgrade your laser to RGB 10W laser system

RGB
output

2.5 RED+3W BLUE

**UPGRADES YOUR GREEN LASER
TO RGB LASER SYSTEM**

2.5W RED 635 nm
3W BLUE 445nm

5W GREEN 532 nm



total weight **39kg**

dimensions: 470mm x 560mm x 235mm

Output power	Wavelength	Input power voltage	Modulation/ Blanking	Beam divergence	Beam diameter	Power consumption
6W	2.5W / 635 nm 3W / 445 nm	230VAC/50Hz 110VAC/50Hz	0-5V analog, TTL up to 50 kHz	<1.5mrad	4mm	max 800VA
	Weight/ dimensions	Input connection	Operating/ storage temper.	Scanning system	Max angle	Scanrate
	17kg 420x215x245mm	ILDA DB25 m. 1x ILDA DB25 f. 1x	10-35°C 0-50°C	CT 6215H	80° for both axes	30 kpps CT6215H

KVANT LASER MODULES

RED SERIES

900mW
Wavelength: 640nm
Input power: 5V/ 9A peak
Beam diameter: 3mm
Beam divergence: 0,8m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz



1,2W
Wavelength: 640nm
Input power: 5V/ 10A peak
Beam diameter: 3,5mm
Beam divergence: 1m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz

2,4W
Wavelength: 640nm
Input power: 5V/ 20A peak
Beam diameter: 3,5mm
Beam divergence: 1m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz

1,8W
Wavelength: 640nm
Input power: 5V/ 18A peak
Beam diameter: 3mm
Beam divergence: 0,8m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz



600mW
Wavelength: 640nm
Input power: 5V/ 5A peak
Beam diameter: 3mm
Beam divergence: 0,8m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz



500mW/1W/1,5W
Wavelength: 635nm
Input power: 5V/ 3.5A/7A/10A peak
Beam diameter: 4mm
Beam divergence: 1,2m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz

1W/2W
Wavelength: 650nm
Input power: 5V/ 5A/8A peak
Beam diameter: 5mm
Beam divergence: 1,2m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 30khz

BLUE SERIES



3W/4W
Wavelength: 445nm
Input power: 12V/ 5A/9A peak
Beam diameter: 5mm
Beam divergence: 0,9m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 50khz



500mW
Wavelength: 445nm
Input power: 12V/ 4A peak
Beam diameter: 4mm
Beam divergence: 0,8m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 50khz

1W/2W
Wavelength: 445nm
Input power: 12V/ 4A/5A peak
Beam diameter: 5mm
Beam divergence: 0,9m rad
Height of beam 2.8mm
Modulation: Analog 0-5V, 50khz

ACCESSORIES

SCANNER SETS

scanner sets standard equipment contains:

- X,Y scanner
- scanner drivers
- scanner aluminum mount
- scanner power PCB
- set of scanner cables
- user manual

MIRRORS

REFLECTION

Reflection mirror STANDARD
with mount
dimensions 150x150mm

Reflection mirror ADJUSTABLE
with mount, fine adjusting
dimensions 150x150mm

Detail of fine adjustment screws

Example of REFLECTION mirror use

DIFFRACTION

Diffraction mirror ADJUSTABLE
with mount, fine adjusting
dimensions 150x150mm

Diffraction mirror STANDARD
with mount
dimensions 150x150mm

Detail of fine adjustment screws

Example of DIFFRACTION mirror use

CT 6215H

- supports aperture of 3mm and 5mm beam



Technical specifications

Mechanical

Angle 40°
Rotor Inertia 0,028gm*cm2
Max. rotor temperat. 100°C

Electric/mechanical driver

Coil resistance 2.53 Ohms, +/-10%
Coil inductance 94 µH, +/-10%
RMS current 4.1 Amperes at Tcase of 50°C, Max
Peak current 8 Amperes, Max

Position detector

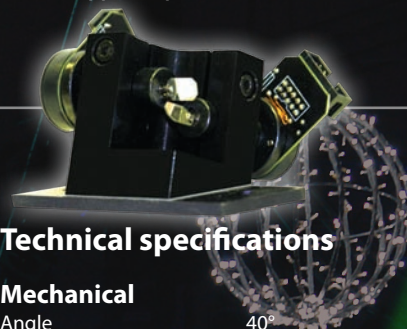
Linearity 99.9% Min., over 15°
99.5% Typical, over 30°
Scale drift 50 PPM/°C, Max
Zero drift 15 µrad/°C, Max

Driver

Input +/- 10V
Operating temperature 0-50°C
Power supply requir. +/-15 to +/-28VDC
+/-4.5ADC Max

LM

- supports aperture of 4mm



Technical specifications

Mechanical

Angle 40°
Rotor Inertia 0.020gm*cm2
Max. rotor temperat. 100°C

Electric/mechanical driver

Coil resistance 4.1 Ohms, +/-10%
Coil inductance 96 µH, +/-10%
RMS current 1.5 Amperes at Tcase of 50°C, Max
Peak current 5 Amperes, Max

Position detector

Linearity 95% Min., over 20°
90% Typical, over 40°
Scale drift 100 PPM/°C, Max
Zero drift 50 µrad/°C, Max

Driver

Input +/- 10V
Operating temperature 0-50°C
Power supply requir. +/-15 to +/-28VDC
+/-3ADC Max

LASER CONTROLLERS

PANGOLIN FLASHBACK 3

unique multifunction laser controller



The **Flashback 3** is the smallest, easiest and most economical multifunctional laser controller. This can play laser up to 432 graphics, beams and even complete Pangolin-quality shows. No extra computer hardware is needed – the tiny Flashback 3 has everything you need to control your laser projector.

3 functions in 1 device

- 1 - Standard USB controller for laser
- 2 - DMX controlled laser controller
- 3 - Stand alone player of pangolin shows stored on SD/XD card (no PC needed)

PANGOLIN QM2000.NET



The **QM2000.NET** provides for a very simple and truly plug-and-play operation of Pangolin QM2000 board. Just locate the QM2000.NET system close to (or installed within) your laser projector, connect it to a computer via Ethernet cable, and use any software within the LD2000 suite. If you want to expand the number of projectors controlled, or create large-scales shows using numerous laser projectors, this is no problem with the QM2000.NET, since you only need to connect them together with standard 10/100 Ethernet cables.

QM2000.NET is available as:

- OEM version (NET board only)
- Compact housing ready to use (include profi alu housing, power supply, LD 2000 board, Net board)



LASER CONTROLLERS

FIESTA LASERSHOW CONTROLLER

Fiesta! is a new generation lasershow software for creating various kind of laser presentation. Its powerful features allow you making amazing live shows or shows for music with unlimited number of laser projectors. Fiesta! uses USB interface to control laser, so finally you can create outstanding shows using your notebook!

DEVICE TECHNOLOGY

- powered by USB port from PC
- usable for notebooks
- signal converter PC-LASER



CUBOX

CUBOX is a device able to play laser shows and animations stored on one SD card, which may contain 256 positions. Each position could be a single picture, an animation with up to 256 frames or a complete laser show. Show duration is limited only with card size. Cubox is supplied with software packages DMX Fill and Quazar 2.

You can use Cubox for live lasershow with controlling by DMX console in real time. You just need to plug a SmartMedia card and choose requested animation or show. In the live mode following parameters can be controlled: drawing position X,Y (16bit), dimmer (brightness settings), position selection, speed of animation and speed of drawing (300 to 40000 pps), color...by value of corresponding channel



Laser Matrix

Laser projectors are becoming more available. And mostly professional users have to face the question how to control such a large number of lasers. It has always been a problem, because most of programs used nowadays are limited by number of output devices or because the way of creating laser shows for such a large number of lasers is very time-consuming.

LaserMatrix is a device that receives 4 ILDA signals in the input and in the output it has 8 ILDA outputs. But it is not only an ordinary splitter, because there is a great possibility to connect any output with any input and also it is possible to set output size, position and brightness in each output.

Controllability by the DMX signal makes it very flexible. LaserMatrix is not restricted only to our products' use, it can be used with any software for creating laser shows.



SCREENS

WATER SCREEN - SHIELD

Half circle shaped water screen
Dimensions approx. 10m high x 27m width
B-Connector connection
Water/pressure requirements
1500 l / minute @ 10 bar
suitable for exterior use
possibility of water floating version
easy manipulation



WATER SCREEN - CURTAIN

Highly transparent water screen
Highlite effect for laser projections
Dimensions according customer request
Available with 1 or 3 nozzles lines
Supplied with water pump on request



SCREEN

Transparent screen material with special coating
to reduce hotspot effects.

Flame resistant according DIN 4102 B1
Recommended for front projection
Dimensions according customers request
Possibility of installing into electric winding screen



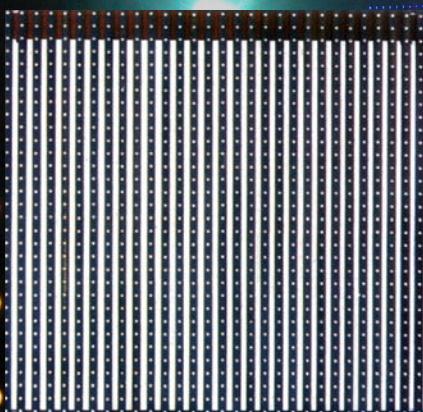
LED displays

Most effective indoor and outdoor displays

LED Strip Video Screen

The LED strip - shaped full color screen is derived with stable direct current and can display video both synchronously and asynchronously with 16.7 million colors.

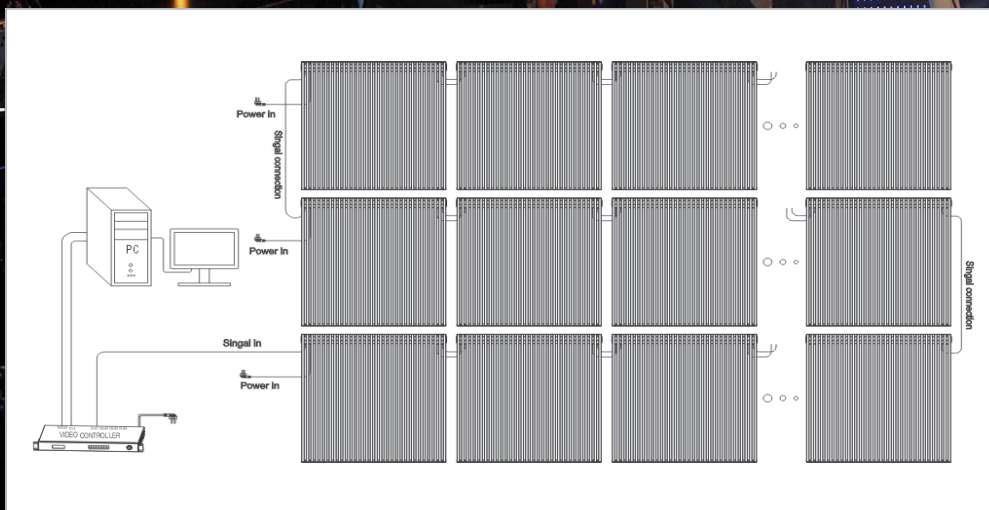
It is advantaged in handiness, super - thinness, transparency, rainproof, super large area application, been pieced and fit together on option and easy installation and disassembly. It is suitable for the stage background of grand performance both indoor and outdoor, advertising media display and so on.



SPECIFICATION

Working Voltage	AC90V-260V, 50-60Hz
Consumption	<200W / PCS
Colors	16.7 M
Working Temperature	-35 C - 55 C
Protection Level	IP 64
Brightness	5000cd/sqm (adjustable)
Tenure Life	> 50,000 hours
Pixel Pitch	25 mm
Weight / Unit	7.5 kg/ Unit
Standard Unit Size	800 x 800 x 85 mm

Wiring and cable connection chart



LED displays

Most effective indoor and outdoor displays

LED DotMatrix Series

Indoor Full-color LED Display

Characteristic

- o High brightness
- o Uniform color, reliable, long life span
- o Wide indoor applications
- o Good consistency, excellent visual effect

Classification

- o Indoor dot matrix LED screen
- o Outdoor dot matrix LED screen
- o Color: Single color, dual color, tri - color, full color

Serial patent product

- o Elliptical hole design to enhance the contrast grade
- o Large visual angle and high brightness suitable for semi - outdoor and superbright environment



Indoor Integrated 3 in 1 full color Series

	Item	PH4	PH4.75	PH6	Item	PH7.62	PH8	PH10
Unit Module	Pixel Pitch	4mm	4.75mm	6mm	Pixel Pitch	7.62mm	8mm	10mm
	Size of pixel	3.0mm(circle)	3.75mm(circle)	4.8mm(circle)	Size of pixel	4.0mm(circle)	3mmx4mm(ellipse)	5mm(circle)
	Pixel configuration	1R1PG1B	1R1PG1B	1R1PG1B	Pixel configuration	1R1PG1B	1R1PG1B	1R1PG1B
	Size of block module	32mmx32mm	38mmx38mm	48mmx48mm	Size of block module	30.2mmx30.2mm	32mmx32mm	40mmx40mm
	Pixel of block module	8x8	8x8	8x8	Pixel of block module	4x4	4x4	4x4
	Size of module	256mmx128mm	304mmx152mm	384mmx192mm	Size of module	488mmx244mm	512mmx256mm	320mmx160mm
	Resolution of module	64x32	64x32	64x32	Resolution of module	64x32	64x32	32x16
	Density	62500dots/㎡	44321dots/㎡	27777dots/㎡	Density	17222dots/㎡	15625dots/㎡	10000dots/㎡
	Best viewing distance	5m—14m	6m—16m	7.5m—20m	Best viewing distance	9m—26m	10m—27m	12.5m—34m
	Best viewing angle	140°	140°	140°	Best viewing angle	140°	140°	140°
	Max power consumption	< 1100W/㎡	< 800W/㎡	< 1000W/㎡	Max power consumption	< 700W/㎡	< 600W/㎡	< 300W/㎡
	Colors	16777216	16777216	16777216	Colors	16777216	16777216	16777216
	Gray scale	14bits	14bits	14bits	Gray scale	14bits	14bits	14bits
	Color temperature	6500K	6500K	6500K	Color temperature	6500K	6500K	6500K
	Control method	Synchronization	Synchronization	Synchronization	Control method	Synchronization	Synchronization	Synchronization
Main parameter	Driving device	Constant current	Constant current	Constant current	Driving device	Constant current	Constant current	Constant current
	Driving method	1/16 scanning	1/16 scanning	1/8 scanning	Driving method	1/8 or 1/4 scanning	1/8 or 1/4 scanning	1/8 or 1/4 scanning
	Frame frequency	≥60Hz	≥60Hz	≥60Hz	Frame frequency	≥60Hz	≥60Hz	≥60Hz
	Refresh frequency	≥180Hz	≥180Hz	≥180Hz	Refresh frequency	≥180Hz	≥180Hz	≥180Hz
	Brightness	> 1800cd/㎡	> 1500cd/㎡	> 1800cd/㎡	Brightness	> 1200cd/㎡	> 1800cd/㎡	> 1400cd/㎡
	Working voltage	AC220V/110V ± 10%	AC220V/110V ± 10%	AC220V/110V ± 10%	Working voltage	AC220V/110V ± 10%	AC220V/110V ± 10%	AC220V/110V ± 10%
	Working temperature	-10℃ ~ +45℃	-10℃ ~ +45℃	-10℃ ~ +45℃	Working temperature	-10℃ ~ +45℃	-10℃ ~ +45℃	-10℃ ~ +45℃
	IP grade	IP20	IP20	IP20	IP grade	IP20	IP20	IP20
	MTBF	> 10000hours	> 10000hours	> 10000hours	MTBF	> 10,000 hours	> 10,000 hours	> 10,000 hours
	Life span	100,000 hours	100,000 hours	100,000 hours	Life span	100,000 hours	100,000 hours	100,000 hours

LR Health and Beauty, Ostrava - Vitkovice 2009

LED displays

Most effective indoor and outdoor displays

LED DotMatrix Series

Outdoor Full-color LED Display

Features and Advantages

1. In order to ensure that images and texts are clear, vivid and consistent, all the chips for the entire RGB LED screens for outdoor screens within 100 square meters are at the same grade such as the same brightness (plus, minus 10%) and the same wavelength (plus, minus 2.5nm)
2. In order to ensure screen background can become matt, completely absorb LED refractive light and eliminate shadow and ghosting, we adopt imported glue to varnish module surface. The glue thickness for each module is not more than 0.1mm. So the color is consistent and uniform.
3. To ensure product reliability, operability and long life, we select the best chips for all outdoor displays.
4. Modular design. Arbitrary combination of sizes, convenient to assembly, exquisite box.
5. Easy to maintain and achieve single-pixel and single-lamp maintenance.
6. High quality at competitive prices.
7. Wide applications including stadiums, advertisements, banks, securities exchange, stations, terminals, shopping malls, postal offices, telecommunications, schools, monitoring, restaurants, entertainment, enterprises and so on.



Outdoor Integrated 3 in 1 full color Series

	Item	PH10	PH12.5	PH16
Unit Module	Pixel Pitch	10mm	12.5mm	16mm
	Size of pixel	4.0mm(circle)	4.5mm(circle)	4.5mm(circle)
	Pixel configuration	1R1PG1B	1R1PG1B	1R1PG1B
	Size of block module	35.5mmx35.5mm	45mmx45mm	23mmx23mm
	Pixel of block module	4x4	4x4	2x2
	Size of module	160mmx80mm	200mmx100mm	256mmx128mm
	Resolution of module	16x8	16x8	16x8
	Density	10000dots/㎡	6400dots/㎡	3906dots/㎡
	Best viewing distance	12.5m—34m	15m—42m	20m—54m
	Best viewing angle	140°	140°	140°
Main parameter	Max power consumption	< 1300W/㎡	< 1000W/㎡	< 1200W/㎡
	Colors	16777216	16777216	16777216
	Gray scale	14bits	14bits	14bits
	Color temperature	6500K	6500K	6500K
	Control method	Synchronization	Synchronization	Synchronization
	Driving device	Constant current	Constant current	Constant current
	Driving method	1/2scanning	1/2scanning	Static scanning
	Frame frequency	≥60Hz	≥60Hz	≥60Hz
	Refresh frequency	≥300Hz	≥300Hz	≥300Hz
	Brightness	>6000cd/㎡	>5000cd/㎡	>5500cd/㎡
Main parameter	Working voltage	AC220V/110V±10%	AC220V/110V±10%	AC220V/110V±10%
	Working temperature	-10℃~+45℃	-10℃~+45℃	-10℃~+45℃
	IP grade	Front IP65/ Rear IP54	Front IP65/ Rear IP54	Front IP65/ Rear IP54
	MTBF	>10,000 hours	>10,000 hours	>10,000 hours
	Life span	100,000 hours	100,000 hours	100,000 hours

Kvant LED screens in Libia 2008

Outdoor LED lamp full color display

	Item	PH12	PH16	PH20	PH25
Unit Module	Pixel Pitch	12mm	16mm	20mm	25mm
	Pixel configuration	2R1PG1B	2R1PG1B	2R1PG1B	2R1PG1B
	Size of module	192mmx96mm	256mmx128mm	320mmx160mm	200mmx200mm
	Resolution of module	16x8	16x8	16x8	8x8
	Density	6944dots/㎡	3906dots/㎡	2500dots/㎡	1600dots/㎡
	Best viewing distance	15m—40m	20m—54m	25m—67m	31m—84m
	Best viewing angle	120°	120°	120°	120°
	Max power consumption	< 1000W/㎡	< 1100W/㎡	< 800W/㎡	< 600W/㎡
	Colors	16777216	16777216	16777216	16777216
	Gray scale	14bits	14bits	14bits	14bits
Main parameter	Color temperature	6500K	6500K	6500K	6500K
	Control method	Synchronization	Synchronization	Synchronization	Synchronization
	Driving device	Constant current	Constant current	Constant current	Constant current
	Driving method	1/4scanning	Static scanning	Static scanning	Static scanning
	Frame frequency	≥60Hz	≥60Hz	≥60Hz	≥60Hz
	Refresh frequency	≥300Hz	≥300Hz	≥300Hz	≥300Hz
	Brightness	>7000cd/㎡	>6500cd/㎡	>5500cd/㎡	>5000cd/㎡
	Working voltage	AC220V/110V±10%	AC220V/110V±10%	AC220V/110V±10%	AC220V/110V±10%
	Working temperature	-10℃~+45℃	-10℃~+45℃	-10℃~+45℃	-10℃~+45℃
	IP grade	Front IP65/ Rear IP54	Front IP65/ Rear IP54	Front IP65/ Rear IP54	Front IP65/ Rear IP54
Main parameter	MTBF	>10,000 hours	>10,000 hours	>10,000 hours	>10,000 hours
	Life span	100,000 hours	100,000 hours	100,000 hours	100,000 hours

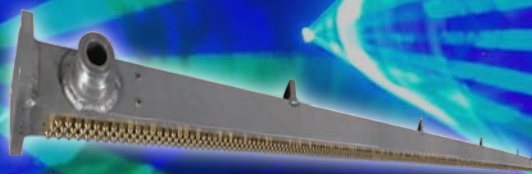
KVANT rental services

ACCESSORIES

● ● ● Bounce mirrors



● ● ● Water screen



Fountains



Photo by J.Vargová

LASERS

WE OFFER:

- Rental of lasers
- Laser show production
- Graphic and beam shows design
- Sale ready ILDA shows
- Accessories rental service
- Rental of LED screens for interior and exterior
- ... and more

Wide range of Green and RGB laser with variety of applications

from 0.5W to 50W



KVANT rental services

LED screens

Indoor LED display delivers images with true color, superb contrast levels and color uniformity. The indoor LED display offers the perfect solution for generating the ultimate picture in all bright indoor environment.

With its sleek, sturdy design, indoor LED modules allow the build up of big size display. Its flexible module structure and user-friendly processor allow you to have your display installed and calibrated easily.

For its excellent picture quality and easy installation, indoor LED display is ideally suited for indoor advertising and events such as major trade shows, product launches, fashion shows, music tours and film and much more ...



Indoor LED display

Rental of LED screens for interior and exterior

Outdoor LED display

Thanks to the development of new True Color, Ultra-bright LED Technology, LED screen are now capable of performing like a real outdoor TV, even under direct sunlight.

Whether it's used as video display or for still images, what else other than an attractive, animated outdoor advertising screen can grab people's attention on a busy street, whether pedestrians or inside a car or bus, stuck in traffic jams.

Outdoor LED display



KVANT[®]

2009

